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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,011	09/29/2000	Ron P. Maurer	1006310-1	9252

22879 7590 11/01/2004

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EXAMINER

EDWARDS, PATRICK L

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/676,011

Applicant(s)

MAURER, RON P.

Examiner

Patrick L Edwards

Art Unit

2621

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 10 September 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: 4-7,13-16,20-22,26-28 and 32-34.

Claim(s) objected to: \_\_\_\_\_

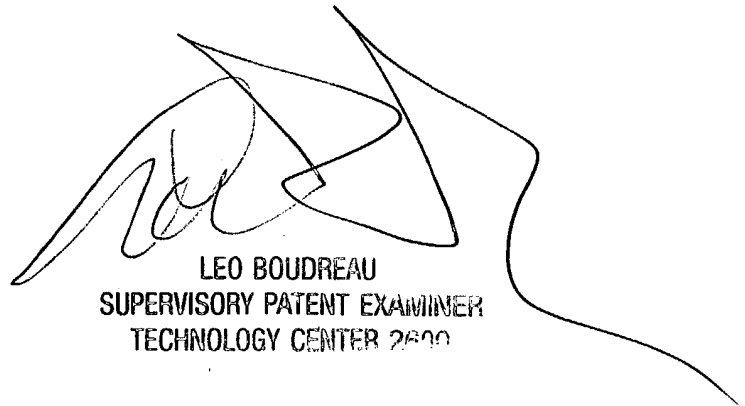
Claim(s) rejected: 2,3,8-12,17-19,23-25,29-31,35 and 36.

Claim(s) withdrawn from consideration: \_\_\_\_\_

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☒ Other: See Continuation Sheet

Continuation of 3. Applicant's reply has overcome the following rejection(s):  
The applicant's amendment to claims 17 and 19 has overcome the 35 USC 112 - 2nd paragraph rejections from the prior office action.

Continuation of 10. Other: A response to the applicant's arguments is provided in the attached document..



LEO BOUDREAU  
SUPERVISORY PATENT EXAMINER  
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Art Unit: 2621

***Response to Arguments***

1. The applicant's arguments, filed on September 10, 2004, have been fully considered. A response to these arguments is provided below. The applicant's arguments will be referred to herein as simply "remarks".

**35 USC 112, Second Paragraph Rejections**

2.

*Summary of Argument:* The applicant has amended claims 17 and 19 to overcome the 35 USC § 112(2) rejections set forth in the previous office action.

*Examiner's Response:* The 35 USC § 112(2) rejections are hereby withdrawn

**Prior Art Rejections**

3.

*Summary of Argument:* With regard to claim 29, applicant argues that the Lee reference does not teach or suggest an "image sharpening program" as is recited in the claim (remarks page 13). Applicant asserts that the Lee disclosure actually blurs an image rather than sharpening it. The applicant asserts that the examiner has incorrectly assumed that this limitation is in the preamble, and has therefore not addressed the limitation (remarks page 13)

*Examiner's Response:* This argument has been fully considered, but is not persuasive. The examiner recognizes that the phrase "an image sharpening program stored in the memory, the program, when executed, causing the processor to ..." is not a part of the claim's preamble, but asserts that this phrase does not further limit the claim. It merely provides a name for the computer program, while failing to add any further limitations. A computer program is defined by the steps that it makes the computer perform, not by an attached label. Thus, a prior art reference which discloses these steps anticipates the claimed program, and does not need to be labeled in exactly the same manner. A discussion of how the Lee reference discloses the steps performed by the claimed computer program was given in the final rejection, and will not be repeated herein.

Further, the examiner disagrees with applicant's assertion that the Lee reference does not disclose image sharpening. Applicant has cited col. 5 line 33 of the Lee reference in support of his conclusion that the image enhancement of Lee is a blurring effect. The cited excerpt, though, is taken out of context. It is talking about the effects of a vertical averaging filter, which is separate from the mapping and clipping operations. The effects of the Lee image enhancement system are shown at col. 9 lines 32-35. Lee discloses taking a low quality image and producing lines which track the true stripes and shadows of the

Art Unit: 2621

object. Thus, this image is sharpened, and we can conclude that Lee discloses an “image sharpening program”.

4.

*Summary of Argument:* Further referring to claim 29, applicant argues that “claim 29 recites a contrast range that is variable within the image being processed.” (remarks page 14)

*Examiner's Response:* The examiner disagrees. This limitation is absent from the claim.

5.

*Summary of Argument:* Referring to claims 10 and 17, applicant is confused by the examiner's use of the word “analogous” (remarks page 16).

*Examiner's Response:* In the previous actions, the examiner has asserted that limitations disclosed in the prior art are “analogous” to limitations recited in the claim. This is equivalent to stating the the limitations are “identically disclosed in”, or “anticipated by” etc., etc. The term “analogous” will be used herein, and should be interpreted as such.

6.

*Summary of Argument:* Referring to claim 10, the applicant argues that the Zimmerman reference does not determine a dynamic range of a pixel neighborhood (remarks page 15).

*Examiner's Response:* The examiner disagrees. Zimmerman discloses that the “mapping applied to each pixel is different and is adaptive to the local distribution of pixel intensities rather than the global information content of the image”. Zimmerman, in Figure 1, shows how the distribution of pixels is determined. Comparing this to figure 1 of the instant application shows that the same operation is being performed. Indeed, a difference between minimum and maximum pixel values is determined. The examiner is fully aware that Figure 1 of Zimmerman shows a *global* distribution of pixel intensities and not a *local* distribution. But the reference discloses that this method is adapted locally, rather than globally. Therefore, we can conclude that the “distribution of pixel intensities” anticipates the claimed “dynamic range”, because the determination is based on the difference between the maximum and minimum pixel values.

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7.

*Summary of Argument:* Referring to claim 10, the applicant argues that the Zimmerman reference fails to disclose contrast stretching. Specifically, applicant argues that the “histogram equalization mapping” disclosed in Zimmerman, does not qualify as a contrast stretching operation.

*Examiner's Response:* The examiner disagrees. Contrast stretching merely refers to the process of increasing the range between maximum and minimum pixel values. In his remarks, applicant admits that histogram equalization mapping tends to spread the local output histogram (remarks page 14). A

Art Unit: 2621

histogram is a graph which shows how the pixel values are distributed. The “contrast” is defined as the width of this histogram. Therefore, the spreading of a histogram, by very definition, is stretching the contrast. Thus, adaptive histogram equalization is a contrast stretching operation. The applicant has provided a textbook printout which provides that contrast stretching and histogram equalization are two different operations. But using the broadest reasonable interpretation of the claim, contrast stretching is anything that stretches the contrast. We have established that Zimmerman’s histogram equalization does just that; therefore the limitations are met by the reference.

8.

*Summary of Argument:* Referring to claim 17, the applicant argues that the Zimmerman reference fails to disclose contrast stretching. Specifically, applicant argues that the “contrast enhancement” disclosed in Zimmerman does not qualify as a contrast stretching operation (remarks page 18-19).

*Examiner’s Response:* The examiner disagrees. See paragraph 7.

9.

*Summary of Argument:* Referring to claim 23, applicant argues that the examiner has erroneously overlooked the preamble, and that Zimmerman does not disclose image sharpening.

*Examiner’s Response:* The examiner disagrees. The examiner disagrees with applicant’s assertion that the preamble is “necessary to give life, meaning, and vitality to the claim”. Therefore the preamble will not be given any weight.

With regard to the second of the above two arguments, applicant’s assertion that ‘Zimmerman’s method ... is not suited for image sharpening’ is without any factual basis. Assuming, arguendo, that this preamble limitation should be considered, the applicant’s argument is still unpersuasive. Figure 3 of Zimmerman shows the original image in the upper left quadrant next to the processed image in the upper right quadrant. The processed image is clearly sharper than the original image. Thus, Zimmerman discloses a sharpening apparatus.

10.

*Summary of Argument:* Referring to claim 2, applicant argues that there is no motivation to combine the Zimmerman and Lee references (remarks page 20 and 21).

*Examiner’s Response:* The examiner disagrees. The motivation to combine these two references was sufficiently and clearly discussed in the final rejection. This rejection will not be repeated herein.

Art Unit: 2621

**Conclusion**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick L Edwards whose telephone number is (703) 305-6301. The examiner can normally be reached on 8:30am - 5:00pm M-F.

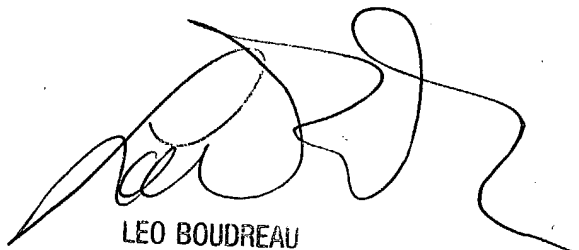
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 2621

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